Information Technology Strategy and Benefits
Fiscal Year 2004

STRATEGIC MANAGEMENT OF INFORMATION RESOURCES

The Railroad Retirement Board is actively pursuing further automation and modernization of its various claims processing systems. Automation initiatives in recent years have significantly improved operations and allowed the agency to reduce staffing in key areas. Ongoing and planned projects will further increase and enhance the efficiency and effectiveness of our systems for benefit payments and program administration. Key initiatives can be grouped into two major categories, as described below.

Application Design Services – Investments in the initiatives in this category focus on automation projects that are critical to our long-range strategy to promote better customer service through automation, while lowering the costs and increasing the efficiency of our operations. The specific investments in this category in fiscal year 2004 include:

- *Document imaging ($75,000)*
  This multi-year initiative is key to accomplishing our objective of paperless processing in the claims operations. These funds will be used for licensing and performance-based contractual support.
- *System development tools ($25,000)*
  The agency will require additional software development tools to remain current with the changing technologies in electronic commerce and to participate in interagency initiatives that seek to better coordinate data sharing among agencies.
- *IT task orders ($250,000)*
  This non-capital item represents funding to implement the President's goals for increasing private-sector competition in commercial-type activities. Contractor resources would be used on a task-order basis as an alternative to filling vacant positions.

Technology Infrastructure Services – These investments are required to establish a firm foundation for the planned technology advances and to maintain our operational readiness. The specific investments in this category in fiscal year 2004 include:

- *Information Security ($150,000)*
  In order to support ongoing improvement of the overall security structure, these funds will be used for implementation of intrusion detection systems and support services ($100,000), and to conduct a high-level vulnerability assessment using contractual assistance ($50,000).
- *Enterprise Architecture ($50,000)*
  The RRB completed the development of its enterprise architecture in FY 2002 with the release of the gap analysis and migration plan. In order to close the gaps between the current and target architectures, contractual assistance will be used to ensure the development of an efficient and effective implementation plan over the coming years.

- *Enterprise Storage Lease Payment ($161,000)*
  In order to support the growing use of electronic services, additional data storage was required. After a competitive selection process, an enterprise network storage system has been installed. This investment represents the second year of the capital lease for this equipment.
- *Standard Workstation Infrastructure (*$300,000*)*
  This represents the amount required to continue the agency's policy of annually replacing and upgrading one-fourth of the agency's desktop computers, printers and related equipment and software needed to ensure an adequate work environment.
- *Network Operations ($250,000)*
  This amount represents replacements and upgrades to network servers and related equipment needed to support a stable and efficient network throughout the agency.
- *Mainframe ($175,000)*
  Funding is requested in fiscal year 2004 for a replacement mainframe processor (Z/OS) or enterprise server (Unix) that will be supported by the vendor for continued maintenance and updated software releases as needed. Funding at the requested level will provide for the first of a multi-year lease of a replacement system.

Detailed information on the RRB's automation initiatives for fiscal year 2004 follows.

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Application Design Services

Capital Element: **Document Imaging**

Fiscal Year 2004 Cost: **$75,000**

Agency Strategy and Benefits:

One of the RRB's key strategic initiatives, the document imaging and workflow system, has been under development and in operation for about 4 years. The objectives of this initiative are to:

- Improve service delivery through immediate access to claim information,
- Eliminate the need for and expense of paper folders and claim materials, and
- Reduce contract costs for claim folder storage and retrieval.

The concept of image processing is to allow claims staff to view certain documentary evidence and materials needed to adjudicate or process a claim through a microcomputer workstation, without having to wait to retrieve a paper claim folder from the central file storage area.

Anticipated and realized benefits of document imaging include:

- Reduced contracting costs for transporting paper claim folders,
- Elimination of folder movement within the agency,
- Improved customer service, and
- Simultaneous access to claim folder information by multiple employees.

Requested funding for this item in fiscal year 2004 includes about $40,000 for replacement of aging components, including two scanners and several monitors. The remaining $35,000 is needed for maintenance of the system.

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Application Design Services

Capital Element: **System Development Tools**

Fiscal Year 2004 Cost: **$25,000**

Agency Strategy and Benefits:

This capital item would be used to expand our capabilities in the systems development area. The enterprise architecture development has identified several initiatives that will require advanced capabilities of our systems developers provided by new tools such as data warehousing, XML, modeling and prototyping. These initiatives will lead to streamlined system development and more efficient systems and databases to better serve our customers.

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Application Design Services

Capital Element: **IT Task Orders**

Fiscal Year 2004 Cost: **$250,000**

Agency Strategy and Benefits:

This non-capital item represents funding to implement the President's goals for increasing private-sector competition in commercial-type activities. Contractor resources would be used on a task-order basis (1) as an alternative to filling vacant positions, and (2) for staff augmentation for network engineering and application development projects.

It is anticipated that task orders in fiscal year 2004 would be used to accelerate the development of e-government initiatives as well as for assistance in migrating from the agency's near-exclusive reliance on a single, non-relational database management system product to multiple, relational database management system products to ensure the long-term viability of the agency's development environment, and to maximize the availability of commercially available off-the-shelf software products.

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Technology Infrastructure Services

Capital Element: **Information Security**

Fiscal Year 2004 Cost: **$150,000**

Agency Strategy and Benefits:

The key to the RRB's philosophy of information security is the concept of "risk management," as opposed to "risk avoidance." RRB accepts that complete avoidance of risk is not cost-effective. Instead, information security risks are assessed, understood and mitigated to the point that residual risks are considered acceptable by management. Implicit to this concept is a "tailored" approach to information protection, in which information and functions of differing criticality are protected at different levels.

Ultimately, management makes an informed determination of acceptable risk and appropriate protection. To support this informed determination, the RRB's Chief Information Officer has established the following agency-wide goals:

1. RRB and contractor employees will understand IT security responsibilities and demonstrate skills needed to carry them out.
2. System and application vulnerabilities will be kept at a level where operations are not jeopardized.
3. RRB will be alert to intrusion attempts and take effective action to thwart them.
4. RRB will utilize an effective infrastructure for authentication, access control and encryption.
5. RRB will maintain effective policies and guidance for IT security, based on law, regulation and best practices.

This non-capital element provides for funding a variety of information security-related measures, including:

- Independent evaluations of system security for major applications,
- Development of the facilities to support detailed third-party security evaluation of user accounts and privileges,
- Development of controls to ensure that workstation connectivity is controlled in accordance with a management policy designed to minimize risk of loss or misuse,
- Implementation of independent reviews of the system administrator functions throughout the agency, and
- Implementation of intrusion detection systems and performance of high-level vulnerability assessment.

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Technology Infrastructure Services

Capital Element: **Enterprise Architecture**

Fiscal Year 2004 Cost: **$50,000**

Agency Strategy and Benefits:

The key to the agency's success in developing and evolving an enterprise architecture that responds to its business needs is the consistent and active participation of all RRB components in defining, instituting and supporting the designated standards, principles, patterns and initiatives. Through nearly a year of collaborative meetings, the RRB target architecture was identified. The target architecture outlines the future direction for various components of the organization that are imperative if we are to successfully meet and adjust to tomorrow's business and technical challenges.

Through extensive collaboration with decision-makers throughout the RRB, research into industry best practices and adherence to the RRB's objectives and architectural principles, the RRB has documented 10 initiatives. These initiatives are identified in the agency's Gap Analysis Results report. They will provide guidance in business decision making and foster the infrastructure, training and skills needed by the IT staff to rapidly and successfully respond to the needs of the agency and its customers.

In fiscal year 2002, an Enterprise Architecture Strategic Plan was developed, highlighting priority elements of specific initiatives and creating a road-map for the next 7-year period, detailing concrete activities, their prerequisites and interdependencies that the agency must begin to undertake if we are to ensure that the Federal IT architecture direction and the agency's business evolution are aligned with, and supportable by, our IT resources.

This non-capital item will provide funding for contractual assistance with the maintenance and evolution of the architecture and its required reference models. The OMB required models include the Performance Reference Model, the Business Reference Model, the Service Component Reference Model, the Data Reference Model and the Technical Reference Model. It will also be used for training, software acquisition and maintenance, and support for architecture related venues such as data modeling, capital planning, project management, and quality assurance and control.

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Technology Infrastructure Services

Capital Element: **Enterprise Storage Lease Payment**

Fiscal Year 2004 Cost: **$161,000**

Agency Strategy and Benefits:

Access to information has become almost as important as the information itself. This is especially true where e-government technology is at the forefront of transforming RRB services for its customers. The RRB needed a data management storage solution that would provide a centralized computing environment with critical Web services for access to real-time data.

The objectives of our data management and storage search were to cut the time spent on managing storage, increase the effective utilization of disk space, reduce costs associated with power consumption, and obtain a large disk storage device that can store terabytes of data. We also needed to reduce back-up from minutes to seconds with a large, more flexible storage solution.

After a competitive process, the RRB selected IBM's "Shark" Enterprise Storage Server (ESS). IBM's 3-terabyte storage solution will support the database, store the majority of the agency's data, and provide quick access to customer services.

This element will fund the fiscal year 2004 annual capital lease payment for this system.

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Technology Infrastructure Services

Capital Element: **Standard Workstation Infrastructure**

Fiscal Year 2004 Cost: **$300,000**

Agency Strategy and Benefits:

This capital element provides the investment needed to establish and maintain a common framework to support agency-wide operations. It reflects the RRB's strategic intention to maintain standardized equipment profiles based on job functions and business needs. To support our strategy, we have defined specific user profiles for various types of microcomputer workstations, depending on the work requirements of the user. This approach allows for more effective and efficient procurement and controls over desktop equipment.

The agency has established a standard replacement cycle for its desktop computing equipment (hardware and software) to ensure that RRB staff is adequately equipped to function effectively at their workstations. Failure to continue with the planned replacement cycle can lead to increased risks of downtime, loss of productivity, an inability to use current versions of software as required, and an inability to serve the customers in a timely manner.

This capital investment represents the replacement of about one-quarter of the agency's desktop and laptop computers, along with upgraded software. It also covers the replacement of peripheral support equipment, such as printers.

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Technology Infrastructure Services

Capital Element: **Network Operations**

Fiscal Year 2004 Cost: **$250,000**

Agency Strategy and Benefits:

This capital item includes funds to support the agency's centralized wide-area network operations.

A shared, intelligent fiber optic backbone for network operations in the headquarters building facilitates the physical movement of microcomputer workstations and provides a secure, reliable operating environment. Referred to as the Virtual Local Area Network (VLAN), this backbone allows for flexible communications between the various servers throughout headquarters and the field offices.

The RRB, with contractor assistance, has recently undergone an upgrade of its overall network infrastructure with the objective of ensuring a stable and robust network infrastructure to support the agency's program needs. This upgrade included conversion to Microsoft Windows Advanced Server Active Directory Service, eliminating the remaining Novell servers, upgrading the agency's email system to Exchange 2000, developing an SQL 2000 database environment for development, testing and production, the introduction of additional network management and monitoring capabilities, and a new firewall technology.

In fiscal year 2004, funding this item will provide for the continued upgrading of the network and replacement of aging servers and other network components, such as routers, switches and their attendant software to ensure reliable and secure communications on a day-to-day basis.

Information Technology Strategy and Benefits
Fiscal Year 2004

Technology Infrastructure Services

Capital Element: **Mainframe**

Fiscal Year 2004 Cost: **$175,000**

Agency Strategy and Benefits:

In early fiscal year 1999, the RRB replaced its mainframe processor, an IBM 3090-400J acquired in 1991, with a new processor, an IBM S/390 Multiprise 2003 2C5. The specific benefits of this replacement included conversion to CMOS (Complementary Metal-Oxide Semiconductor) technology, which does not require specialized water-cooling or air conditioning as the previous technology did. In general, CMOS processors require less space, lower energy costs, and lower maintenance costs. Space savings have been used to help consolidate other computer equipment (such as LAN servers) from other floors in the headquarters building in order to facilitate coordination and more standardized administration.

We procured the replacement processor through a 3-year operating lease, with an optional buy-out in the fourth year. During fiscal year 2001, the RRB decided to accelerate the termination of the lease and to buy out the equipment in fiscal year 2001 rather than waiting until fiscal year 2002.

After replacing the mainframe processor, we also replaced the operating system, IBM MVS/ESA, also acquired in 1991, with OS/390. The mainframe operating system supports our nationwide delivery of services as well as our suite of mainframe legacy application programs and databases. This transition ensured that the operating environment is current and viable, and will continue to be supported by the vendor.

Our current plans are to replace the mainframe in fiscal year 2004 with flexible enterprise server capabilities and greater capacity than the current system. This will support the agency's plans for increasingly automated operations and new e-government functions. Anticipated benefits include reduced energy requirements, faster performance, growth options for increased capacity, and an ongoing ability to install new releases of operating system software as issued. Technical studies will be ongoing during fiscal year 2003 to develop additional detailed justification for this replacement.

Requested funding is for initiating a lease arrangement, probably for 3 years, similar to the method of acquisition for our current mainframe processor.

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